

REMARKS

Reconsideration of this application, in view of the foregoing amendments and the following remarks, is respectfully requested.

Specification

The disclosure is objected to because of certain informalities.

Applicants have amended the specification to remove informalities.

Drawings

The drawings are objected to under 37 CFR 1.83(a) for failing to show the plurality of lens in claims 4 & 9.

Claims 4 and 9 have been canceled.

Claim Objections

Claims 20-21, 23-24, and 26 are objected to because of the following informalities: "An antenna" should be changed to --The antenna--. Applicants respectfully disagree. Applicants believe that the phrase "An object according to a claim" is proper per PTO guidelines. Applicants respectfully request the withdrawal of the objection.

Rejection and Allowance of Claim 10

As to claim 10, the Examiner has indicated that claim 10 is allowable; however, the Examiner has also issued a rejection of claim 10 without any citation to elements in the cited reference. Applicants believe that claim 10 is allowable and have amended claim 6 to include the limitation of claim 10. Accordingly, claim 6 and those depend therefrom are patentably distinguishable from the cited reference.

Claim Rejections under 35 USC § 102

Claims 1-10 and 12-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Mizuno et al. (U.S. Patent No. 5,977,904).

Claims 1-5 have been canceled.

Regarding claims 13-17 and 22-24, the Examiner has stated that “method claims 13-17 & 22-24, the **apparatus discussed above would perform the claimed method.**” (Emphasis added). Applicants respectfully point to the Examiner that claim 13 specifically recites method steps that are not even addressed in apparatus claim. For Example, claim 13 recites

- a. determining a first radiation pattern of each of said plurality of array elements in the absence of said lens;
- b. determining a second radiation pattern of each of said plurality of array elements based on said first radiation pattern, wherein said second radiation pattern is computed with reference to a common origin for all of said plurality of array elements;
- c. computing a composite radiation pattern (CRP) of said antenna based on said second radiation pattern for each of said plurality of array elements;
- d. characterizing said desired collimation pattern in the presence of said lens; and
- e. determining a shape of said lens is determined from the characterized collimation pattern and said CRP.

The cited reference does not even discuss the design of the lens as recited in claims 13, 22, 25, and those depend therefrom. Applicants respectfully request a careful examination of claims 13, 22, 25, and those depend therefrom and in alternative, an allowance of claims 13, 22, 25, and those depend therefrom.

As to claim 19, the Examiner has rejected claim 19 in the manner of claim 13. Applicants respectfully point to the Examiner that claim 19 very specifically recites that a shape of the lens is determined using a composite radiation pattern of the antenna and the desired collimation pattern. The cited reference does not teach this limitation. In fact, in the cited sections, the reference does not even address the radiation pattern. Further, the cited reference

very clearly states that antenna elements are disposed on a focal plane of the dielectric lens 8. Further, the antenna elements 12a – 12f are aligned perpendicular to an optical axis of the dielectric lens 8 (*see* col. 4, lines 1-17). Thus, the cited reference does not determine collimation patterns as recited in claim 19. Accordingly, claim 19 and those depend therefrom are patentably distinguishable from the cited reference.

Applicant believes this application and the claims herein to be in a condition for allowance. Please charge any additional fees, or credit overpayment to Deposit Account No. 20-0668. Should the Examiner have further inquiry concerning these matters, please contact the below named attorney for Applicant.

Respectfully submitted,



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